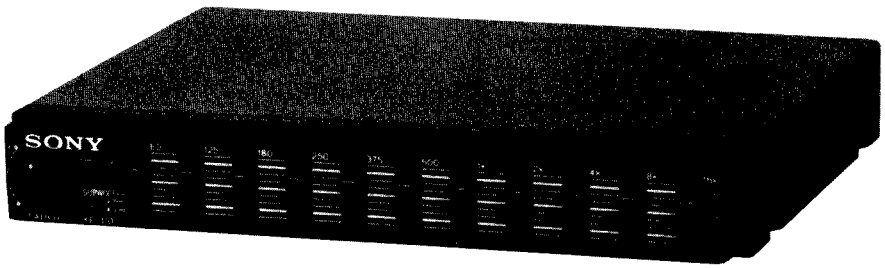
XE-110

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model



SPECIFICATIONS

Frequency response
10 Hz - 100 kHz
Signal-to-noise ratio
92 dB (A-weighted)
Center frequencies
60 Hz, 125 Hz, 180 Hz,
250 Hz, 375 Hz, 500 Hz,
1 kHz, 2 kHz, 4 kHz, 8 kHz,
16 kHz
Boost/cut range
±12 dB
Gain 0 dB

General

Inputs Remote control input (sure seal connectors)
Power input (sure seal connectors)
Line input (phono jack, 1)
Outputs Line outputs (phono jack, 3)
Distortion 0.002% (A-weighted)

Sub woofer cut-off frequency
120 Hz, 200 Hz
output gain −∞ − +6 dB
cut-off slope 12 dB/oct
Power requirements
12 V dc car battery (negative ground)
Current drain
250 mA
Mounting dimensions
Approx. 178 × 25 × 135 mm (w/h/d)
(7 × 1 × 5 3/8 inches)
Weight Approx. 0.7 kg (1 lb 72 oz)
Accessories supplied
Mounting hardware (1 set)
Spare fuse (1 A) (1)
Connecting cord (2)

FEATURE

- 11 frequency bands for precise tonal control with a boost/cut range of either ±12 dB.
- Low distortion and high signal-to-noise ratio is provided, suitable for connection with a compact disc player.
- Sub woofer speakers can be connected for powerful reproduction of lower frequencies.
- By switching the CUT OFF switch, you can regulate the output power of lower frequencies.
- FADER control to adjust the balance of front and rear speaker volume of 4-speaker system.
- By switching the EQ (equalization) switch on and off easy compensation between the equalized sound and non-equalized sound is possible.

STEREO GRAPHIC EQUALIZER

SONY®

MICROFILM

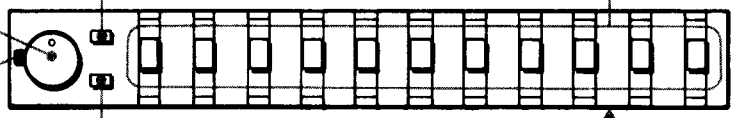
AUD

LOCATION AND FUNCTION OF CONTROLS

FADER control
Turn the control counterclockwise to increase the volume of the front speakers, or clockwise to increase the volume of the rear speakers on a 4-speaker system.
On a 2-speaker system, set this control to the center position.

Graphic equalizer controls
Slide upwards to boost the frequency. Slide downwards to cut the frequency.

EQ (equalization) switch
Depress the switch to ON (⎍) to add the inserted equalization values. The switch will light up. When the equalizer controls are not used, press the switch again OFF (⎍).



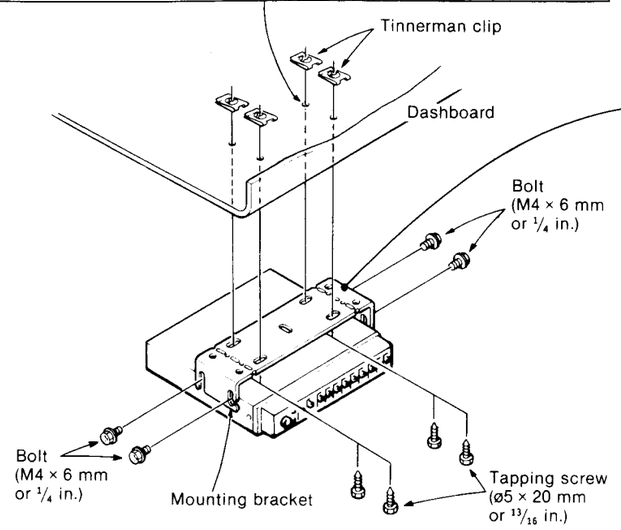
CUT OFF switch
When the switch is in the released position (⎍, 120 Hz), sound lower than 120 Hz can be controlled with the SUB WOOFER LEVEL control.
If you want to compensate for the low frequency more effectively, depress it (⎍, 200 Hz).

SUB WOOFER LEVEL control
Turn the control clockwise to increase the level of the sub woofer speakers. You can control the level of the sub woofer without being influenced by the FADER control.

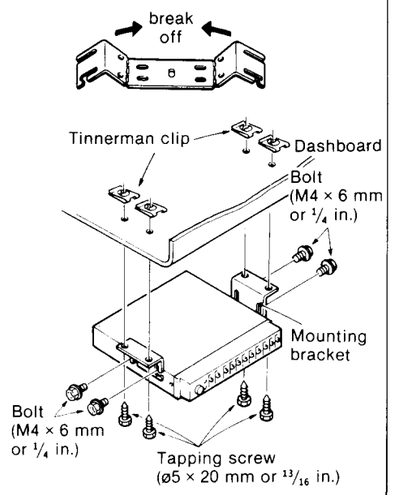
LEVEL ADJ (output level adjustment) control (bottom)
Adjust the output sound level with this control when using source equipment of other manufacturers.

INSTALLATION

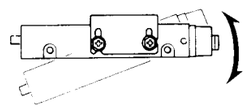
Choose the mounting procedure that suits your car best.	
If the dashboard or the firewall is thin or made of plastic or a similar material, drill 3 mm (1/8") bolt holes and secure the unit with tapping screws and tinnerman clips.	**If the dashboard of firewall is made of metal plate,** drill 3 mm (1/8") bolt holes and secure the unit by screwing the tapping screws into these holes. The tinnerman clips are not necessary in this case.
If the unit cannot be installed to your car in either of these ways, ask your dealer for assistance.	



The unit can also be installed as shown in the illustration below.



The mounting position, height and angle can be adjusted as illustrated below.

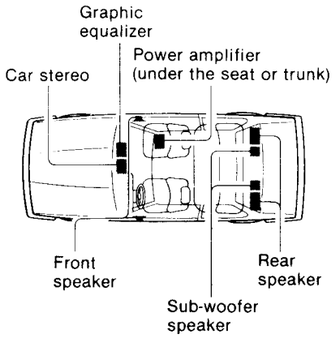


1 Using the supplied mounting bracket as a template, mark the locations of the holes on the bottom of the dashboard and drill the bolt holes 3 mm (1/8 in.) dia.
2 Secure the mounting bracket to the bottom of the dashboard.
3 Secure the unit to the mounting bracket.

Notes
- Be sure to use the supplied M4 × 6 mm (1/4 in.) bolts for mounting the bracket on the unit. Longer bolts will damage the unit.
- Be carefull not to damage wiring or equipment on the other side of the firewall.

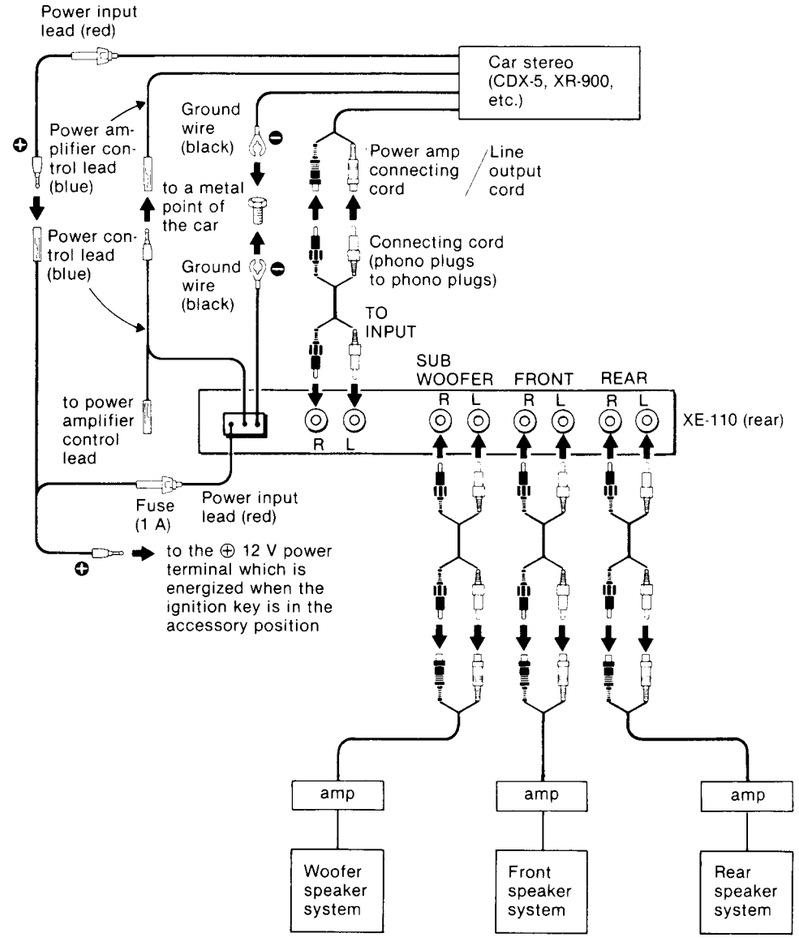
The unit can be installed inside the dashboard using an optional in-dash installation Kit: GMD-100F for Crysler or Ford model or GMD-100G for General Motors model.

Mounting example



PRECAUTION
- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where:
  - It would be subject to high temperatures, such as from direct sunlight or from hot air from the heater.
  - It would be exposed to rain or moisture.
  - It would be subject to dust or dirt.

CONNECTIONS



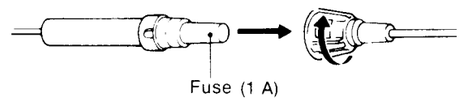
Caution
- This unit is designed for negative ground 12 V dc operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the red power input lead only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- Run all ground wires to a common ground point.
- For details on the connections of the cassette player, tuner and power amplifier, refer to the instruction manual supplied with each unit.

Auxiliary input lead connection
For connection, use the supplied connecting cord with two phono plugs to two phono plugs.
Note that the red jack should be connected with the red plug of the connecting cord.

FUSE REPLACEMENT

The fuse will blow if excessive current is drawn. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. You should then consult your nearest Sony dealer.

Warning
Use only a 1 ampere fuse for the red power input lead. Use of a higher amperage fuse may cause serious damage.



SECTION 1
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

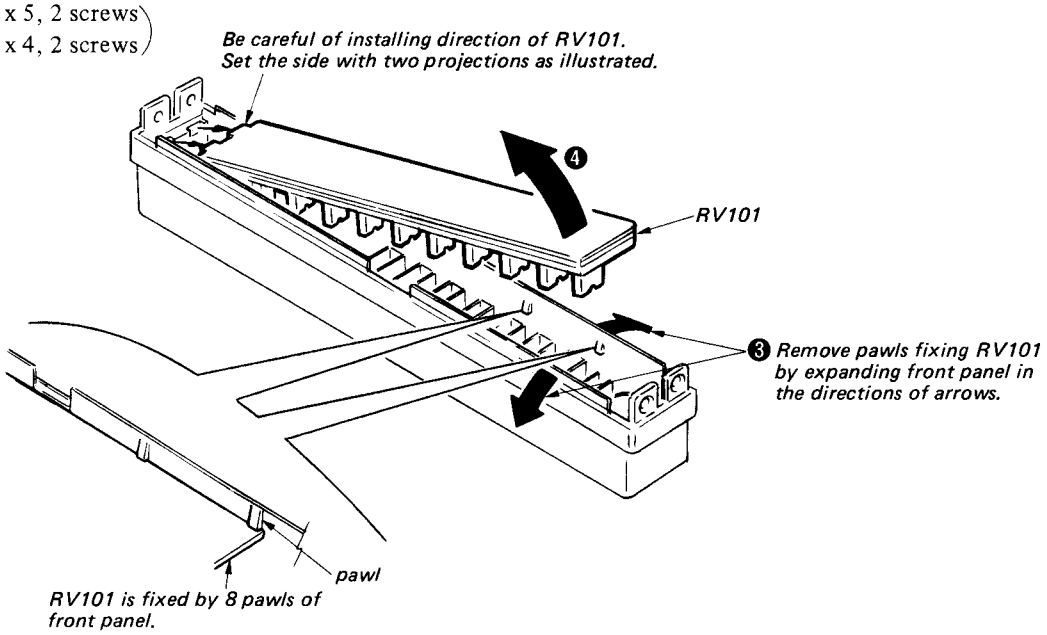
UPPER CASE
Take out 4 screws (B3 x 4) to remove upper case.

FRONT PANEL, RV101 (Slide Volume Block)

If necessary, remove connectors CN501, CN502 and CN503 of RV101.

❶ Remove **FADER** knob and **SUB WOOFER LEVEL** knob.

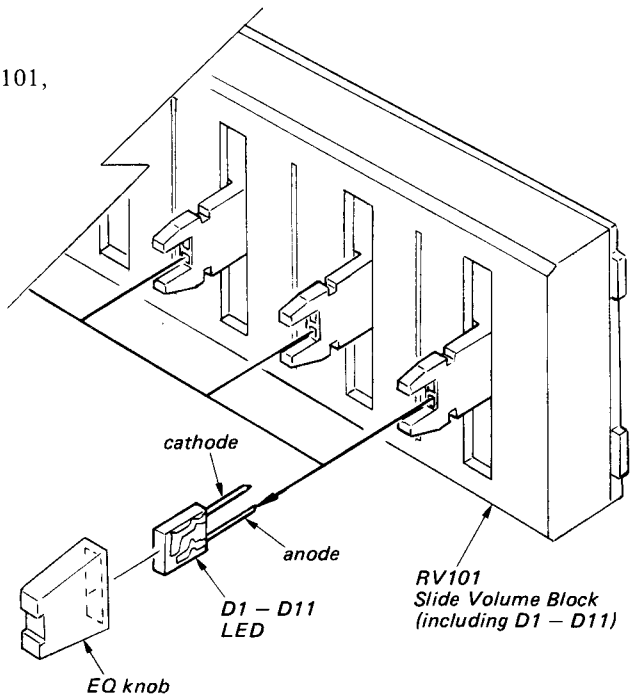
❷ Take out 4 screws fixing front panel.
(left side: K2.6 x 5, 2 screws
right side: K2.6 x 4, 2 screws)


Be careful of installing direction of RV101.
Set the side with two projections as illustrated.
❹
RV101
❸ Remove pawls fixing RV101 by expanding front panel in the directions of arrows.
pawl
RV101 is fixed by 8 pawls of front panel.

LEDs OF D1 – D11 REMOVAL

Though LEDs of D1 – D11 are built in RV101, only LEDs can be replaced.

Pull out EQ knob, and then pull out LED.



2-1. SCHEMATIC DIAGRAM

Note:

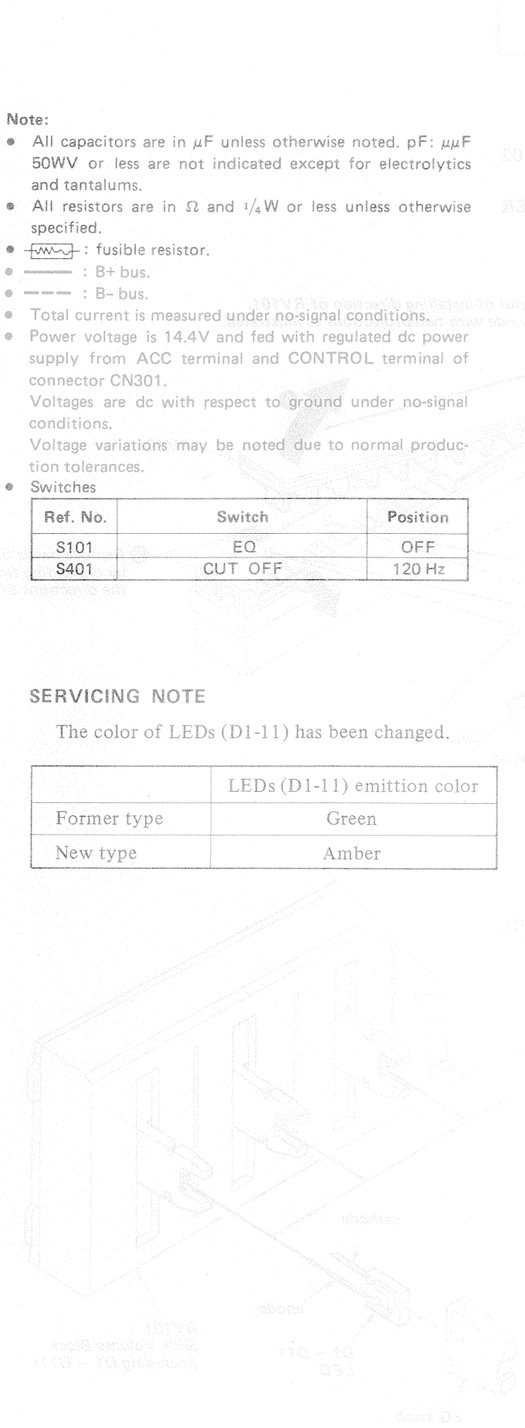
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ⏦: fusible resistor.
- ——— : B+ bus.
- – – – : B– bus.
- Total current is measured under no-signal conditions.
- Power voltage is 14.4V and fed with regulated dc power supply from ACC terminal and CONTROL terminal of connector CN301.
  Voltages are dc with respect to ground under no-signal conditions.
  Voltage variations may be noted due to normal production tolerances.
- Switches

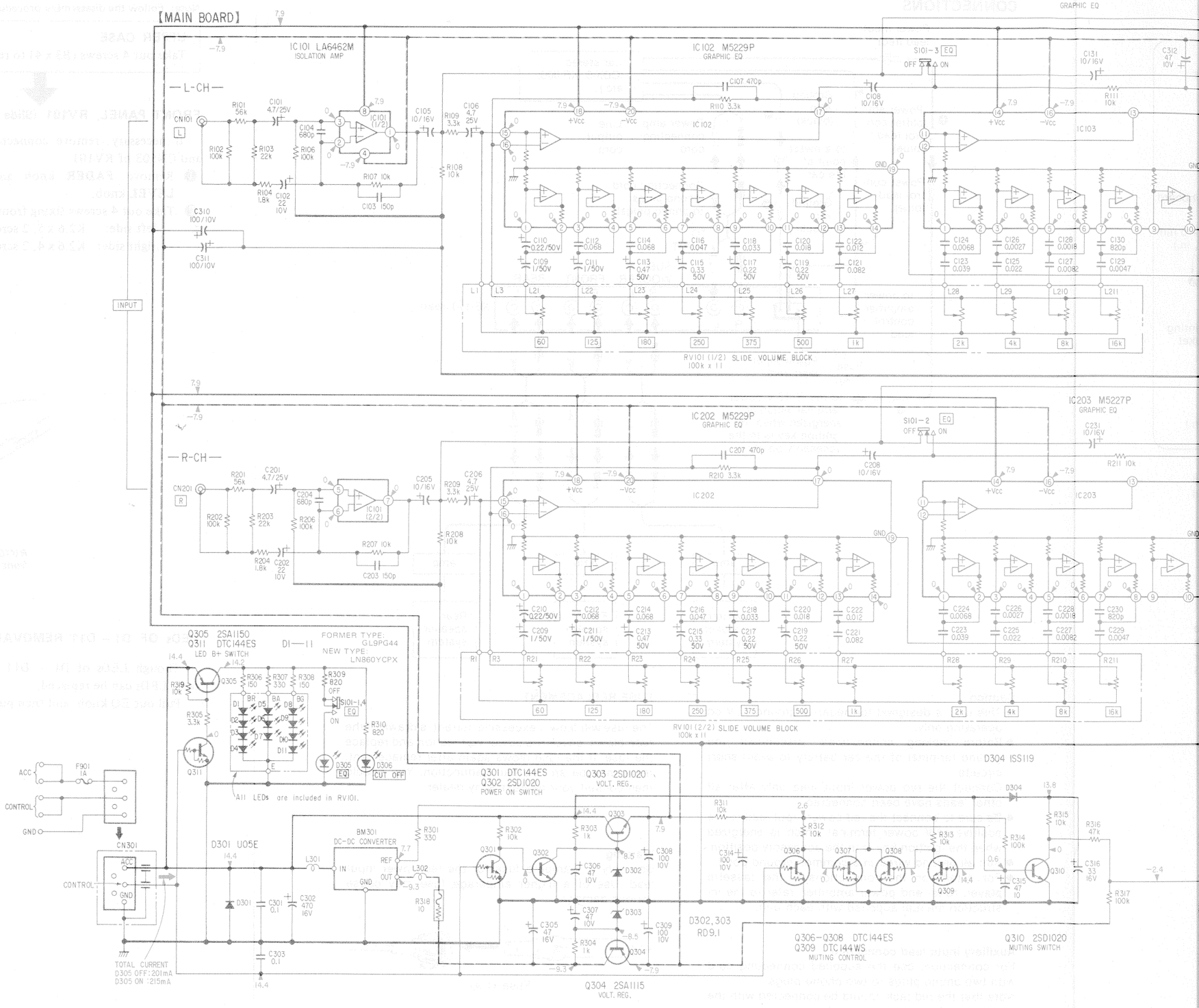
Ref. No.	Switch	Position
S101	EQ	OFF
S401	CUT OFF	120 Hz

SERVICING NOTE

The color of LEDs (D1-11) has been changed.

	LEDs (D1-11) emittion color
Former type	Green
New type	Amber





7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

A B C D E F G H I J

【MAIN BOARD】

IC101 LA6462M ISOLATION AMP

IC102 M5229P GRAPHIC EQ

IC103 M5227P GRAPHIC EQ

IC104 LA6462M LINE AMP

IC202 M5229P GRAPHIC EQ

IC203 M5227P GRAPHIC EQ

IC204 LA6462M LINE AMP

IC401 LA6462M LOWPASS FILTER

IC402 TC4066BF SWITCH

—L-CH— —R-CH—

S101-3 EQ OFF ON

S101-2 EQ OFF ON

S101-1,4 EQ ON

S401 CUT OFF 200Hz 120Hz

RV101 (1/2) SLIDE VOLUME BLOCK 100k x 11

RV101 (2/2) SLIDE VOLUME BLOCK 100k x 11

60 125 180 250 375 500 1k 2k 4k 8k 16k

Q101 2SC2878 MUTING

Q201 2SC2878 MUTING

Q401 2SC2878 MUTING

Q402 2SC2878 MUTING

Q102 2SC2878 MUTING

Q202 2SC2878 MUTING

Q305 2SA1150 Q311 DTC144ES LED B+ SWITCH

FORMER TYPE: GL9PG44 NEW TYPE: LN860YCPX

All LEDs are included in RV101.

D301 U05E BM301 DC-DC CONVERTER

Q301 DTC144ES Q302 2SD1020 POWER ON SWITCH

Q303 2SD1020 VOLT. REG.

Q304 2SA1115 VOLT. REG.

D304 1SS119

D302,303 RD9.1

Q306-Q308 DTC144ES Q309 DTC144WS MUTING CONTROL

Q310 2SD1020 MUTING SWITCH

LEVEL ADJ FRONT

LEVEL ADJ REAR

FADER F/R

FADER +/-

FRONT L

REAR L

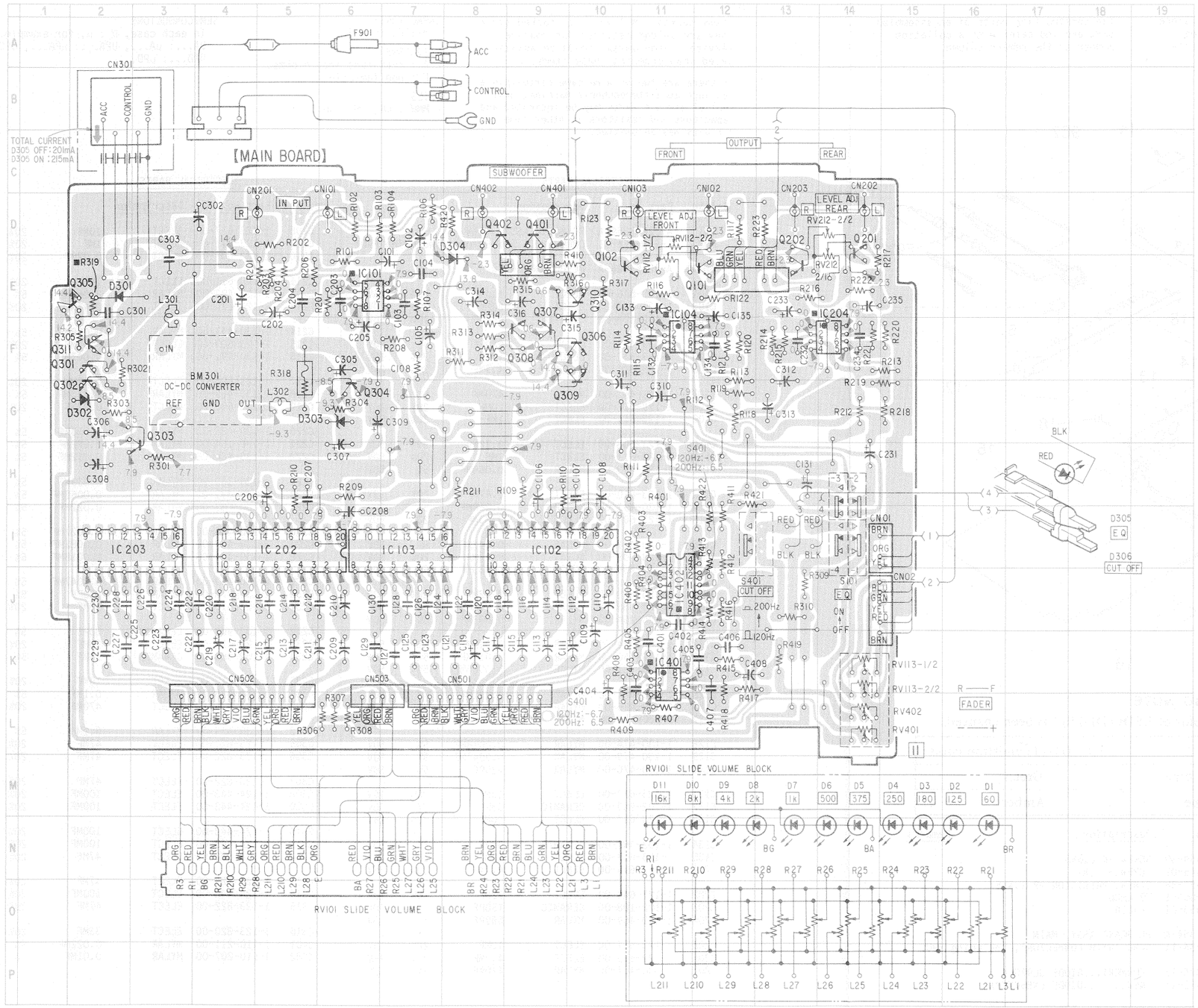
FRONT R

REAR R

OUTPUT

SUBWOOFER

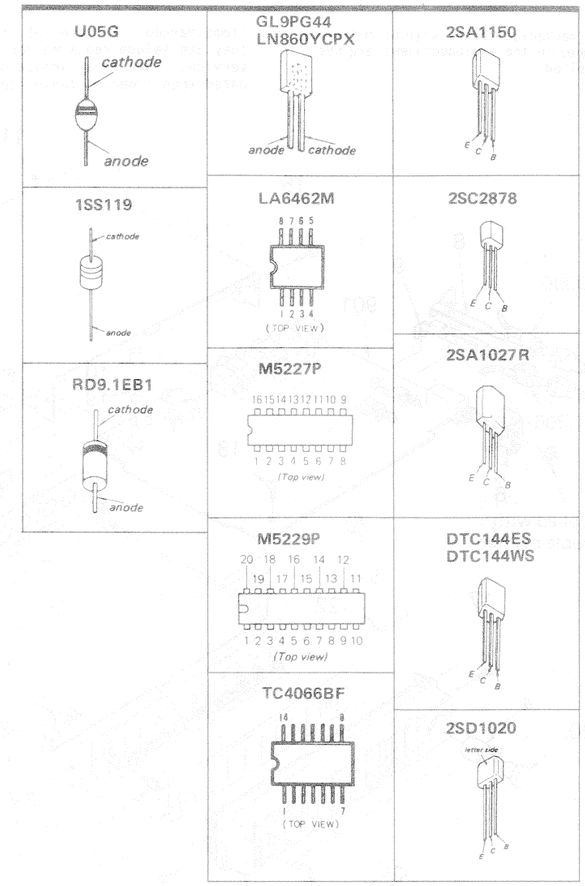
2-2. MOUNTING DIAGRAM



Note:

- ○— : parts extracted from the component side.
- ■ : part mounted on the conductor side.

● Semiconductor Lead Layouts

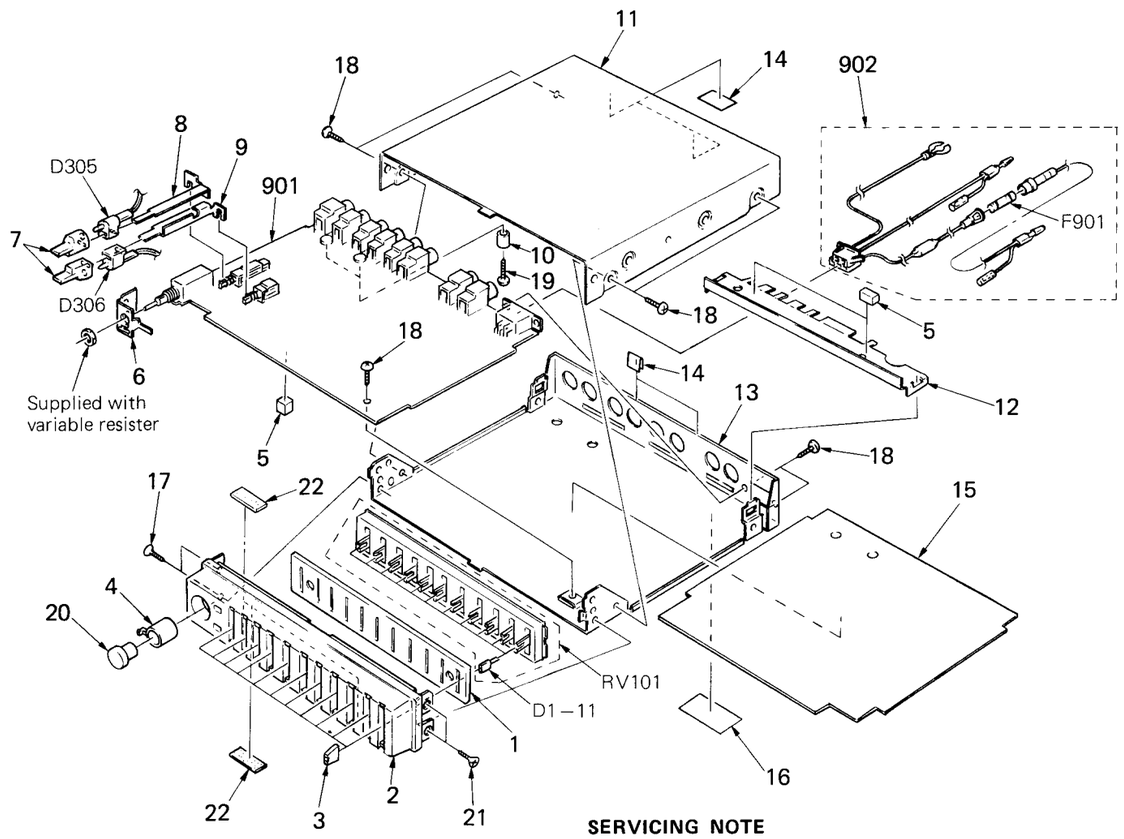


● Semiconductor Location

Ref.No.	Location	Ref.No.	Location
D301	E-2	Q101	E-12
D302	G-2	Q102	E-10
D303	G-5	Q201	D-14
D304	D-8	Q202	D-13
D305	I-18	Q301	F-1
D306	I-18	Q302	G-2
		Q303	G-3
IC101	E-6	Q304	G-6
IC102	I-9	Q305	E-2
IC103	I-7	Q306	F-10
IC104	E-11	Q307	E-9
IC202	I-5	Q308	F-9
IC203	I-2	Q309	G-10
IC204	I-14	Q310	E-10
IC401	K-11	Q311	F-1
IC402	J-11	Q401	D-9
		Q402	D-8

SECTION 3
EXPLODED VIEW AND PARTS LIST

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.



SERVICING NOTE

The color of LEDs (D1-11) has been changed.

	LEDs (D1-11) emittion color
Former type	Green
New type	Amber

No.	Part No.	Description	Remarks
1	3-831-441-XX	SHEET, BLIND	
2	3-322-042-01	PANEL, FRONT	
3	3-322-034-01	KNOB, EQ	
4	3-322-039-01	KNOB, VOLUME	
5	9-911-841-XX	CUSHION	
6	*3-322-031-01	BRACKET, VOLUME	
7	3-322-009-01	BUTTON (B)	
8	*3-322-032-01	LEVER (A), SWITCH	
9	*3-322-033-01	LEVER (B), SWITCH	
10	3-322-037-01	KNOB, LEVEL ADJUSTMENT	
11	3-322-011-41	CASE, UPPER	
12	*3-322-040-01	RETAINER, PIN JACK	
13	*3-322-041-01	CASE, LOWER	
14	3-831-441-XX	CUSHION (D)	
15	9-911-863-XX	SHEET, INSULATING	
16	*3-322-030-01	(US,AEP,E)...LABEL, MODEL NUMBER	
	3-322-050-01	(Canadian)...LABEL, MODEL NUMBER	
17	7-621-559-30	SCREW +K 2.6X5	
18	7-682-545-09	SCREW +B 3X4	
19	7-627-551-38	SCREW, PRECISION +P 1.4X5	
20	X-3322-003-1	FD KNOB	
22	*3-322-053-01	SPACER	
901	*A-3260-359-A	PC BOARD ASSY, MAIN	
902	1-558-254-11	CORD (WITH CONNECTOR), including F901	
D1-D11	1-807-375-11	(FORMER)...DIODE GL9PG44	
D1-D11	1-807-471-11	(NEW).....DIODE LN860YCPX	
D305	1-806-957-11	DIODE ASSY, PG3433SY (LED)	
D306	1-807-314-11	DIODE ASSY, AA3433S (LED)	
F901	1-532-360-XX	FUSE, 1A	
RV101	1-237-050-11	(FORMER)...RES, VAR, SLIDE (BLOCK), including D1 to D11	
RV101	1-237-050-21	(NEW).....RES, VAR, SLIDE (BLOCK), including D1 to D11	

SECTION 4
ELECTRICAL PARTS LIST

NOTE:
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
901	*A-3260-359-A	PC BOARD ASSY, MAIN			
902	1-558-254-11	CORD (WITH CONNECTOR), including F901			
BM301	A-3215-906-A	DC-DC CONVERTER			
C101	1-123-616-00	ELECT	4.7MF	20%	25V
C102	1-123-644-00	ELECT	22MF	20%	10V
C103	1-102-108-00	CERAMIC	150PF	10%	50V
C104	1-130-469-00	MYLAR	680PF	5%	50V
C105	1-123-617-00	ELECT	10MF	20%	16V
C106	1-123-616-00	ELECT	4.7MF	20%	25V
C107	1-130-467-00	MYLAR	470PF	5%	50V
C108	1-123-617-00	ELECT	10MF	20%	16V
C109	1-123-611-00	ELECT	1MF	20%	50V
C110	1-123-608-00	ELECT	0.22MF	20%	50V
C111	1-123-611-00	ELECT	1MF	20%	50V
C112	1-130-493-00	MYLAR	0.068MF	5%	50V
C113	1-123-610-00	ELECT	0.47MF	20%	50V
C114	1-130-493-00	MYLAR	0.068MF	5%	50V
C115	1-123-609-00	ELECT	0.33MF	20%	50V
C116	1-130-491-00	MYLAR	0.047MF	5%	50V
C117	1-123-608-00	ELECT	0.22MF	20%	50V
C118	1-130-489-00	MYLAR	0.033MF	5%	50V
C119	1-123-608-00	ELECT	0.22MF	20%	50V
C120	1-130-486-00	MYLAR	0.018MF	5%	50V
C121	1-136-164-00	MYLAR	0.082MF	5%	50V
C122	1-130-484-00	MYLAR	0.012MF	5%	50V
C123	1-136-160-00	MYLAR	0.039MF	5%	50V
C124	1-130-481-00	MYLAR	0.0068MF	5%	50V
C125	1-130-487-00	MYLAR	0.022MF	5%	50V
C126	1-130-476-00	MYLAR	0.0027MF	5%	50V
C127	1-130-482-00	MYLAR	0.0082MF	5%	50V
C128	1-130-474-00	MYLAR	0.0018MF	5%	50V
C129	1-130-479-00	MYLAR	0.0047MF	5%	50V
C130	1-130-470-00	MYLAR	820PF	5%	50V
C131	1-123-617-00	ELECT	10MF	20%	16V
C132	1-102-963-00	CERAMIC	33PF	5%	50V
C133	1-123-617-00	ELECT	10MF	20%	16V
C134	1-102-963-00	CERAMIC	33PF	5%	50V
C135	1-123-617-00	ELECT	10MF	20%	16V
C201	1-123-616-00	ELECT	4.7MF	20%	25V
C202	1-123-644-00	ELECT	22MF	20%	10V
C203	1-102-108-00	CERAMIC	150PF	10%	50V
C204	1-130-469-00	MYLAR	680PF	5%	50V
C205	1-123-617-00	ELECT	10MF	20%	16V
C206	1-123-616-00	ELECT	4.7MF	20%	25V
C207	1-130-467-00	MYLAR	470PF	5%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C208	1-123-617-00	ELECT	10MF	20%	16V
C209	1-123-611-00	ELECT	1MF	20%	50V
C210	1-123-608-00	ELECT	0.22MF	20%	50V
C211	1-123-611-00	ELECT	1MF	20%	50V
C212	1-130-493-00	MYLAR	0.068MF	5%	50V
C213	1-123-610-00	ELECT	0.47MF	20%	50V
C214	1-130-493-00	MYLAR	0.068MF	5%	50V
C215	1-123-609-00	ELECT	0.33MF	20%	50V
C216	1-130-491-00	MYLAR	0.047MF	5%	50V
C217	1-123-608-00	ELECT	0.22MF	20%	50V
C218	1-130-489-00	MYLAR	0.033MF	5%	50V
C219	1-123-608-00	ELECT	0.22MF	20%	50V
C220	1-130-486-00	MYLAR	0.018MF	5%	50V
C221	1-136-164-00	MYLAR	0.082MF	5%	50V
C222	1-130-484-00	MYLAR	0.012MF	5%	50V
C223	1-136-160-00	MYLAR	0.039MF	5%	50V
C224	1-130-481-00	MYLAR	0.0068MF	5%	50V
C225	1-130-487-00	MYLAR	0.022MF	5%	50V
C226	1-130-476-00	MYLAR	0.0027MF	5%	50V
C227	1-130-482-00	MYLAR	0.0082MF	5%	50V
C228	1-130-474-00	MYLAR	0.0018MF	5%	50V
C229	1-130-479-00	MYLAR	0.0047MF	5%	50V
C230	1-130-470-00	MYLAR	820PF	5%	50V
C231	1-123-617-00	ELECT	10MF	20%	16V
C232	1-102-963-00	CERAMIC	33PF	5%	50V
C233	1-123-617-00	ELECT	10MF	20%	16V
C234	1-102-963-00	CERAMIC	33PF	5%	50V
C235	1-123-617-00	ELECT	10MF	20%	16V
C301	1-130-495-00	MYLAR	0.1MF	5%	50V
C302	1-124-475-11	ELECT	470MF	20%	16V
C303	1-130-495-00	MYLAR	0.1MF	5%	50V
C305	1-123-821-00	ELECT	47MF	20%	16V
C306	1-123-822-00	ELECT	47MF	20%	10V
C307	1-123-822-00	ELECT	47MF	20%	10V
C308	1-124-443-00	ELECT	100MF	20%	10V
C309	1-124-443-00	ELECT	100MF	20%	10V
C310	1-124-443-00	ELECT	100MF	20%	10V
C311	1-124-443-00	ELECT	100MF	20%	10V
C312	1-123-822-00	ELECT	47MF	20%	10V
C313	1-123-822-00	ELECT	47MF	20%	10V
C314	1-124-443-00	ELECT	100MF	20%	10V
C315	1-123-822-00	ELECT	47MF	20%	10V
C316	1-123-820-00	ELECT	33MF	20%	16V
C401	1-110-211-00	MYLAR	0.022MF	5%	50V
C402	1-110-207-00	MYLAR	0.01MF	5%	50V

SERVICING NOTE

The color of LEDs (D1-11) has been changed.

	LEDs (D1-11) emittion color
Former type	Green
New type	Amber

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C403	1-102-963-00	CERAMIC	33PF	5%	50V
C404	1-123-617-00	ELECT	10MF	20%	16V
C405	1-110-211-00	MYLAR	0.022MF	5%	50V
C406	1-110-207-00	MYLAR	0.01MF	5%	50V
C407	1-102-963-00	CERAMIC	33PF	5%	50V
C408	1-123-617-00	ELECT	10MF	20%	16V
CN101	1-563-068-11	JACK, PIN 1P			
CN102	1-563-068-11	JACK, PIN 1P			
CN103	1-563-068-21	JACK, PIN 1P			
CN201	1-563-068-21	JACK, PIN 1P			
CN202	1-563-068-11	JACK, PIN 1P			
CN203	1-563-068-21	JACK, PIN 1P			
CN301	1-564-691-11	CONNECTOR			
CN401	1-563-068-11	JACK, PIN 1P			
CN402	1-563-068-21	JACK, PIN 1P			
CN501	*1-564-628-11	PIN, CONNECTOR 13P			
CN502	*1-564-628-11	PIN, CONNECTOR 13P			
CN503	*1-560-467-00	PIN, CONNECTOR 4P			
D1	1-807-375-11	(FORMER)...DIODE GL9PG44			
D1	1-807-471-11	(NEW).....DIODE LN860YCPX			
D2	1-807-375-11	(FORMER)...DIODE GL9PG44			
D2	1-807-471-11	(NEW).....DIODE LN860YCPX			
D3	1-807-375-11	(FORMER)...DIODE GL9PG44			
D3	1-807-471-11	(NEW).....DIODE LN860YCPX			
D4	1-807-375-11	(FORMER)...DIODE GL9PG44			
D4	1-807-471-11	(NEW).....DIODE LN860YCPX			
D5	1-807-375-11	(FORMER)...DIODE GL9PG44			
D5	1-807-471-11	(NEW).....DIODE LN860YCPX			
D6	1-807-375-11	(FORMER)...DIODE GL9PG44			
D6	1-807-471-11	(NEW).....DIODE LN860YCPX			
D7	1-807-375-11	(FORMER)...DIODE GL9PG44			
D7	1-807-471-11	(NEW).....DIODE LN860YCPX			
D8	1-807-375-11	(FORMER)...DIODE GL9PG44			
D8	1-807-471-11	(NEW).....DIODE LN860YCPX			
D9	1-807-375-11	(FORMER)...DIODE GL9PG44			
D9	1-807-471-11	(NEW).....DIODE LN860YCPX			
D10	1-807-375-11	(FORMER)...DIODE GL9PG44			
D10	1-807-471-11	(NEW).....DIODE LN860YCPX			
D11	1-807-375-11	(FORMER)...DIODE GL9PG44			
D11	1-807-471-11	(NEW).....DIODE LN860YCPX			
D301	8-719-911-55	DIODE U05G			
D302	8-719-100-50	DIODE RD9.1EB1			
D303	8-719-100-50	DIODE RD9.1EB1			
D304	8-719-911-19	DIODE 1SS119			
D305	1-806-957-11	DIODE ASSY, PG3433SY (LED)			
D306	1-807-314-11	DIODE ASSY, AA3433S (LED)			
F901	1-532-360-XX	FUSE, 1A			
IC101	8-759-802-48	IC LA6462M			
IC102	8-759-603-14	IC M5229P			
IC103	8-759-603-12	IC M5227P			
IC104	8-759-802-48	IC LA6462M			
IC202	8-759-603-14	IC M5229P			
IC203	8-759-603-12	IC M5227P			

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
IC204	8-759-802-48	IC LA6462M			
IC401	8-759-802-48	IC LA6462M			
IC402	8-759-201-01	IC TC4066BF			
L301	1-421-635-00	COIL, CHOKE			
L302	1-421-635-00	COIL, CHOKE			
Q101	8-729-201-04	TRANSISTOR 2SC2878			
Q102	8-729-201-04	TRANSISTOR 2SC2878			
Q201	8-729-201-04	TRANSISTOR 2SC2878			
Q202	8-729-201-04	TRANSISTOR 2SC2878			
Q301	8-729-900-89	TRANSISTOR DTC144ES			
Q302	8-729-102-03	TRANSISTOR 2SD1020			
Q303	8-729-102-03	TRANSISTOR 2SD1020			
Q304	8-729-612-77	TRANSISTOR 2SA1027R			
Q305	8-729-205-02	TRANSISTOR 2SA1150			
Q306	8-729-900-89	TRANSISTOR DTC144ES			
Q307	8-729-900-89	TRANSISTOR DTC144ES			
Q308	8-729-900-89	TRANSISTOR DTC144ES			
Q309	8-729-900-85	TRANSISTOR DTC144WS			
Q310	8-729-102-03	TRANSISTOR 2SD1020			
Q311	8-729-900-89	TRANSISTOR DTC144ES			
Q401	8-729-201-04	TRANSISTOR 2SC2878			
Q402	8-729-201-04	TRANSISTOR 2SC2878			
R101	1-247-873-00	CARBON	56K	5%	1/6W
R102	1-247-879-00	CARBON	100K	5%	1/6W
R103	1-247-863-00	CARBON	22K	5%	1/6W
R104	1-247-837-00	CARBON	1.8K	5%	1/6W
R106	1-247-879-00	CARBON	100K	5%	1/6W
R107	1-249-429-11	CARBON	10K	5%	1/6W
R108	1-249-429-11	CARBON	10K	5%	1/6W
R109	1-247-843-00	CARBON	3.3K	5%	1/6W
R110	1-247-843-00	CARBON	3.3K	5%	1/6W
R111	1-249-429-11	CARBON	10K	5%	1/6W
R112	1-249-437-11	CARBON	47K	5%	1/6W
R113	1-247-879-00	CARBON	100K	5%	1/6W
R114	1-249-429-11	CARBON	10K	5%	1/6W
R115	1-247-853-00	CARBON	8.2K	5%	1/6W
R116	1-247-843-00	CARBON	3.3K	5%	1/6W
R117	1-247-863-00	CARBON	22K	5%	1/6W
R118	1-249-437-11	CARBON	47K	5%	1/6W
R119	1-247-879-00	CARBON	100K	5%	1/6W
R120	1-249-429-11	CARBON	10K	5%	1/6W
R121	1-247-853-00	CARBON	8.2K	5%	1/6W
R122	1-247-843-00	CARBON	3.3K	5%	1/6W
R123	1-247-863-00	CARBON	22K	5%	1/6W
R201	1-247-873-00	CARBON	56K	5%	1/6W
R202	1-247-879-00	CARBON	100K	5%	1/6W
R203	1-247-863-00	CARBON	22K	5%	1/6W
R204	1-247-837-00	CARBON	1.8K	5%	1/6W
R206	1-247-879-00	CARBON	100K	5%	1/6W
R207	1-249-429-11	CARBON	10K	5%	1/6W
R208	1-249-429-11	CARBON	10K	5%	1/6W
R209	1-247-843-00	CARBON	3.3K	5%	1/6W
R210	1-247-843-00	CARBON	3.3K	5%	1/6W
R211	1-249-429-11	CARBON	10K	5%	1/6W
R212	1-249-437-11	CARBON	47K	5%	1/6W

SERVICING NOTE

The color of LEDs (D1-11) has been changed.

	LEDs (D1-11 emittion color
Former type	Green
New type	Amber

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R213	1-247-879-00	CARBON	100K	5%	1/6W	
R214	1-249-429-11	CARBON	10K	5%	1/6W	
R215	1-247-853-00	CARBON	8.2K	5%	1/6W	
R216	1-247-843-00	CARBON	3.3K	5%	1/6W	
R217	1-247-863-00	CARBON	22K	5%	1/6W	
R218	1-249-437-11	CARBON	47K	5%	1/6W	
R219	1-247-879-00	CARBON	100K	5%	1/6W	
R220	1-249-429-11	CARBON	10K	5%	1/6W	
R221	1-247-853-00	CARBON	8.2K	5%	1/6W	
R222	1-247-843-00	CARBON	3.3K	5%	1/6W	
R223	1-247-863-00	CARBON	22K	5%	1/6W	
R301	1-247-819-00	CARBON	330	5%	1/6W	
R302	1-249-429-11	CARBON	10K	5%	1/6W	
R303	1-247-831-00	CARBON	1K	5%	1/6W	
R304	1-247-831-00	CARBON	1K	5%	1/6W	
R305	1-247-843-00	CARBON	3.3K	5%	1/6W	
R306	1-247-811-00	CARBON	150	5%	1/6W	
R307	1-247-819-00	CARBON	330	5%	1/6W	
R308	1-247-811-00	CARBON	150	5%	1/6W	
R309	1-247-829-00	CARBON	820	5%	1/6W	
R310	1-247-829-00	CARBON	820	5%	1/6W	
R311	1-249-429-11	CARBON	10K	5%	1/6W	
R312	1-249-429-11	CARBON	10K	5%	1/6W	
R313	1-249-429-11	CARBON	10K	5%	1/6W	
R314	1-247-879-00	CARBON	100K	5%	1/6W	
R315	1-249-429-11	CARBON	10K	5%	1/6W	
R316	1-249-437-11	CARBON	47K	5%	1/6W	
R317	1-247-879-00	CARBON	100K	5%	1/6W	
R318	1-217-387-00	FUSIBLE	10	5%	1/4W	F
R319	1-249-429-11	CARBON	10K	5%	1/6W	
R401	1-215-445-00	METAL	10K	1%	1/6W	
R402	1-215-460-00	METAL	43K	1%	1/6W	
R403	1-215-463-00	METAL	56K	1%	1/6W	
R404	1-215-476-00	METAL	200K	1%	1/6W	
R405	1-215-445-00	METAL	10K	1%	1/6W	
R406	1-215-478-00	METAL	240K	1%	1/6W	
R407	1-249-429-11	CARBON	10K	5%	1/6W	
R408	1-247-853-00	CARBON	8.2K	5%	1/6W	
R409	1-249-421-11	CARBON	2.2K	5%	1/6W	
R410	1-247-863-00	CARBON	22K	5%	1/6W	
R411	1-215-445-00	METAL	10K	1%	1/6W	
R412	1-215-460-00	METAL	43K	1%	1/6W	
R413	1-215-463-00	METAL	56K	1%	1/6W	
R414	1-215-476-00	METAL	200K	1%	1/6W	
R415	1-215-445-00	METAL	10K	1%	1/6W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R416	1-215-478-00	METAL	240K	1%	1/6W
R417	1-249-429-11	CARBON	10K	5%	1/6W
R418	1-247-853-00	CARBON	8.2K	5%	1/6W
R419	1-249-421-11	CARBON	2.2K	5%	1/6W
R420	1-247-863-00	CARBON	22K	5%	1/6W
R421	1-249-429-11	CARBON	10K	5%	1/6W
R422	1-247-879-00	CARBON	100K	5%	1/6W
RV101	1-237-050-11	(FORMER)...RES, VAR, SLIDE (BLOCK), including D1 to D11			
RV101	1-237-050-21	(NEW).....RES, VAR, SLIDE (BLOCK), including D1 to D11			
RV112	1-237-049-11	RES, VAR, CARBON 20K/20K			
RV212	1-237-049-11	RES, VAR, CARBON 20K/20K			
RV113	1-237-048-12	RES, VAR, CARBON 20KX4			
RV401		(FADER, SUB WOOFER LEVEL)			
RV402					
S101	1-570-165-11	SWITCH, PUSH (1 KEY)(EQ)			
S401	1-554-824-11	SWITCH, PUSH (1 KEY)(CUT OFF)			

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-532-360-XX	FUSE, 1A
1-556-167-00	CORD, CONNECTION
1-558-254-11	CORD (WITH CONNECTOR)
3-315-736-11	BRACKET, NEW D
3-315-746-01	STOPPER (SMALL)
3-320-636-01	BAG (C), PROTECTION (FOR SET)
3-322-046-01	INDIVIDUAL CARTON
3-322-051-01	CUSHION
3-701-613-00	BAG, POLYETHYLENE (FOR FUSE)
3-701-626-00	BAG, POLYETHYLENE (FOR PRINTED MATTER)
3-760-935-21	(US,AEP,E).....MANUAL, INSTRUCTION
3-760-935-31	(Canadian,AEP,E)...MANUAL, INSTRUCTION
*3-764-310-21	INSTRUCTION
X-3315-702-1	SCREW ASSY (25MM), FITTING

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